

REMARKS

Information Disclosure Statement

Applicant notes that an Information Disclosure Statement and Form PTO-1449 are being submitted. Applicant would appreciate the Examiner initializing and returning the Form PTO-1449, indicating that the information has been considered and made of record herein.

Summary of the Rejections

Claim 34 is withdrawn from consideration.

Claims 1 and 30 were rejected as being vague and indefinite.

The independent claims 1 and 30 were rejected by the Examiner as being anticipated by the Taylor publication (Anal. Chem. 1992, vol. 64, 1741-1744).

Several dependent claims were rejected as being unpatentable over Taylor in combination with several other references.

Claims 1-31 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 09/887,953.

These rejections are respectfully traversed.

Summary of the Response

Claims 1 and 30 have been amended to include the limitation of the widened detection zone.

Traversal of Rejections

35 U.S.C. § 112, ¶ 2 Rejection of Claims 1 and 30

The Examiner stated that the term “close proximity” in claim 21 is vague and indefinite because there is no definition of the term provided in the specification. Applicant respectfully traverses the rejection. The term is understandable when read in light of the specification (e.g., page 13, lines 10-15; page 15, lines 17-23; page 17, lines 1-18; page 22, lines 10-20). The scope of the claim 21 is definite, as it is to be interpreted in light of the specification. Furthermore, the Examiner failed to demonstrate that one of ordinary skill in the art would not reasonably be apprised of the scope of the claim.

35 U.S.C. § 102(b) Rejection of Claims 1-5, 7, 26, 27 and 29-31

The Examiner rejected independent claims 1 and 30 as being anticipated by Taylor et al (Axial-Beam Laser-Excited Fluorescence Detection in Capillary Electrophoresis, Anal. Chem. 1992, vol. 64, 1741-1744). Taylor does not disclose a system in which a separation channel has a widened detection section defining a widened detection zone. Rather, Taylor discloses a system in which an optical fiber (core diameter 46 μm , cladding = 50 μm , jacket = 51 μm) is inserted into a capillary of 75 μm i.d. Taylor does not disclose the capillary having a widened section at the detection zone, but rather a capillary having a uniform width along its length, even at the detection zone.

Independent claims 1 and 30 have been amended to incorporate the limitation of dependent claim 25, which is the limitation of the detection zone having a width larger than the width of the separation channel. Claim 25 is dependent on claim 1 and is not anticipated by Taylor. Accordingly, independent claims 1 and 30 as amended are not anticipated by Taylor. It also follows that all the dependent claims should also be patentable over Taylor.

35 U.S.C. § 103(a) Rejections

The Examiner rejected claims 6 and 8 over Taylor in view of Liu et al (U.S. 5,416,879), claims 9-14 over Taylor in view of Hazman et al (U.S. 5,625,403), claim 15 over Taylor in view of Hazman, and in further view of Amirkhanian et al (US 6,184,990), and claim 23 and 24 over Taylor in view of Pentoney, Jr. et al (US 5,675,155). Applicant respectfully traverses the rejections. Taylor alone or in combination do not disclose a widened detection zone. Claim 1 as amended includes the limitation of the widened detection zone. The dependent claims therefore are patentable over Taylor alone or in combination.

The Examiner rejected claims 16, 17 and 25-28 over Taylor in view of Zhu et al (US 5,763,277). The Examiner stated that Zhu taught the use of a fiber optic provides a system of use for inducing and detecting sample analytes identifying fluorescence. The Applicant respectfully disagrees. Taylor discloses use of a fiber optic for axial excitation of the sample and does not disclose use of this fiber optic for axial detection. Rather, Taylor discloses off-column detection. Zhu does not make up for the deficiencies of Taylor. Zhu teaches use of a fiber optic for axial detection and teaches only off-column excitation. In fact, Zhu teaches away from axial

excitation. Zhu conflicts with Taylor. Accordingly, the claims are patentable over Taylor in view of Zhu.

The Examiner rejected some claims over Taylor in view of Zhu and in further view of other references (Letcher et al (US 6,326,213), and Hazman). The claims are patentable for the same reasons stated above.

Provisional Double Patenting/Restriction Requirement

The Examiner imposed restriction requirement on the previously presented claim 34, which is directed to axial detection. However, the Examiner also imposed a provisional double patenting rejection with respect to a copending application that is also directed to axial detection.

Applicant submits that the claims in the present application are directed to incident axial excitation radiation, not axial detection of emitted radiation as in the pending claims in copending application no. 09/887,953. The claims in both copending applications could not be obvious over one another. The Examiner has not provided sufficient basis to support his view that it would have been obvious to one of ordinary skill in the art to incorporate the radiation in certain directions in order to optimize the measurement of the signal, when the present invention is directed to incident radiation, not detection of emitted radiation. Applicant notes that in its copending application (Serial No. 09/887,953) the Examiner appears to have withdrawn his earlier provisional double patenting rejection in his most recent Office Action in that case.

Applicant respectfully submits that it would be inconsistent to impose both restriction requirement and double patenting rejection with respect to the subject matter (i.e., axial detection) of copending application 08/887,953, under the circumstances of the present

application and the copending application. By nature of double patenting rejection, the claims of copending applications are deemed not patentably distinct from each other. On the other hand, by nature of restriction requirement, the restricted claim 34 is deemed to be directed to a patentably distinct invention. However, in this case, claim 34, by way of an earlier amendment, was essentially copied from the copending application. (Applicant introduced claim 34 in the present application, merely to illustrate the inconsistencies noted here.) It would be inconsistent to find claim 34 to be patentably distinct from the rest of the claims pending in the present application, and yet find the same pending claims in the present application to be patentably similar to the copending application that claim the same subject matter as claim 34.


Conclusion

In view of all the foregoing, Applicant submits that the claims pending in this application are patentable over the references of record and are in condition for allowance. Such action at an early date is earnestly solicited. The Examiner is invited to call the undersigned representative to discuss any outstanding issues that may not have been adequately addressed in this response.

The Assistant Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this Response and associated documents but have not been enclosed, or to credit any overpayment to **Deposit Account No. 501288** referencing docket no. 1031/204.

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Respectfully submitted,

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